Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-22. (Canceled)

23. (Previously Presented) An immunogenic, HIV-1 Env peptide of 5-150 amino acid residues of LAV_{MAL} Env sequences in Figures 3E-3F having at least one amino acid substitution at one or more of positions 8, 9, 90, 102, 131, 133, 140, 156, 172, 177, 179, 185, 188, 192, 198, 207, 209, 290, 305, 308, 323, 333, 335, 337, 341, 342, 353, 356, 359, 363, 404, 428, 440, 457, 41, 477, 483, 484, 486, 538, 555, 641, 652, 656, 660, 663, 694, 740, 733, 799, 854, 856, 862, and 875 in relation to Env sequences of LAV_{BRU}, LAV_{ARV2}, and LAV_{ELI}; wherein said peptide binds to antibodies in AIDS patient sera; and wherein said antibodies are capable of binding to viral antigens encoded by the LAV_{MAL} molecular clone having C.N.C.M. accession number I-641.

24. (Previously Presented) The peptide of claim 23, wherein said peptide is generated by chemical cleavage.

25. (Previously Presented) The peptide of claim 23, wherein said peptide is expressed from a recombinant DNA.

26. (Previously Presented) The peptide of claim 23, wherein said peptide is generated by chemical synthesis.

27. (Currently Amended) A method for detecting antibodies to HIV ~~and neutralizing antibodies in a test sample to HIVgp120~~ in a test sample ~~in an immunoassay~~ comprising:

a) providing at least one peptide of claim 23 affixed to a solid support;

b) combining a test sample with the at least one peptide affixed to the solid support;

c) optionally rinsing the solid support to remove unbound antibodies of the test sample; and

d) detecting peptide-antibody complex formed, which is indicative of the presence of HIV antibodies in the test sample

~~by using the peptide of claim 23 as an immunosorbent~~.

28. (Currently Amended) A method of eliciting neutralizing antibodies to HIV in a mammal comprising:

a) providing a composition comprising at least one peptide of claim 23, a suitable pharmaceutically or physiologically acceptable carrier, and optionally an adjuvant;

b) immunizing the mammal with the composition; and

c) optionally testing a blood sample from the mammal to assay for the binding affinity and neutralizing activity of the elicited antibodies

~~by introducing into a mammal the peptide of claim 23~~.

29-30. (Canceled)

31. (Currently Amended) The peptide of claim 23, wherein the peptide comprises at least one of the following conserved sequences: positions 37-130, 211-289, 488-530, 490-620, ~~531-877,~~ and 680-700 of Env as shown in Fig. 3E-F.

32. (Currently Amended) A method for detecting antibodies to HIV ~~and neutralizing antibodies~~ in a test sample ~~to HIVgp120 in an immunoassay~~ comprising:

a) providing at least one peptide of claim 31 affixed to a solid support;

b) combining a test sample with the at least one peptide affixed to the solid support;

c) optionally rinsing the solid support to remove unbound antibodies of the test sample; and

d) detecting peptide-antibody complex formed, which is indicative of the presence of HIV antibodies in the test sample

~~by using the peptide of claim 31 as an immunosorbent~~.

33. (Currently Amended) A method of eliciting neutralizing antibodies to HIV in a mammal comprising:

a) preparing a vaccine comprising at least one peptide of claim 31, a suitable pharmaceutically or physiologically acceptable carrier, and optionally an adjuvant;

b) immunizing the mammal with the vaccine; and

c) optionally testing a blood sample from the mammal to assay for the binding affinity and neutralizing activity of the elicited antibodies

~~by introducing into a mammal the peptide of claim 31~~.

34. (Previously Presented) An immunogenic, HIV-1 Env peptide of at least 21 amino acid residues of LAV_{MAL} Env sequences in Figures 3E-3F having at least one amino acid substitution consisting of an amino acid substitution at one or more of positions 8, 9, 90, 102, 131, 133, 140, 156, 172, 177, 179, 185, 188, 192, 198, 207, 209, 290, 305, 308, 323, 333, 335, 337, 341, 342, 353, 356, 359, 363, 404, 428, 440, 457, 41, 477, 483, 484, 486, 538, and 555, 641, 652, 656, 660, 663, 694, 740, 733, 799, 854, 856, 862, 875; wherein said peptide binds to antibodies in AIDS patient sera; and wherein said antibodies are capable of binding to viral antigens encoded by the LAV_{MAL} molecular clone having C.N.C.M. accession number I-641.

35. (Previously Presented) The peptide of claim 34, wherein the peptide has 21 amino acids.

36. (Previously Presented) The peptide of claim 34, wherein the peptide has 43 amino acids.

37. (Previously Presented) The peptide of claim 34, wherein the peptide has 79 amino acids.

38. (Previously Presented) The peptide of claim 34, wherein the peptide has 94 amino acids.

39. (Previously Presented) The peptide of claim 34, wherein the peptide has 131 amino acids.

40. (New) An immunogenic, HIV-1 Env peptide of at least 21 amino acid residues of LAV_{MAL} Env sequences in Figures 3E-3F comprising at least one of the following conserved sequences:

a) amino acid residues 680-700;

b) amino acid residues 488-530;

c) amino acid residues 211-289;

d) amino acid residues 37-130; and

e) amino acid residues 490-620;

wherein said peptide binds to antibodies in AIDS patient sera; and wherein said antibodies are capable of binding to viral antigens encoded by the LAV_{MAL} molecular clone having C.N.C.M. accession number I-641.

41. (New) A method for detecting antibodies to HIV in a test sample comprising:

a) providing at least one isolated HIV-1 LAV_{MAL} Env peptide consisting of 5-150 amino acid residues as set forth in Figures 3E-3F affixed to a solid support, wherein said peptide contains a LAV_{MAL}-specific antigenic determinant;

b) combining a test sample with the at least one peptide affixed to the solid support;

c) optionally rinsing to remove unbound antibodies of the test sample;

d) detecting peptide-antibody complex formed, which is indicative of the presence of HIV antibodies in the test sample.

42. (New) The method of claim 41, wherein said peptide is generated by chemical cleavage.

43. (New) The method of claim 41, wherein said peptide is expressed from a recombinant DNA.

44. (New) The method of claim 41, wherein said peptide is generated by chemical synthesis.

45. (New) The method of claim 41, wherein said peptide binds to antibodies in AIDS patient sera; and wherein said antibodies are capable of binding to viral antigens encoded by the LAV_{MAL} molecular clone having C.N.C.M. accession number I-641.

46. (New) A method of eliciting neutralizing antibodies to HIV in a mammal comprising:

a) providing a vaccine comprising the an isolated HIV-1 LAV_{MAL} Env peptide consisting of 5-150 amino acid residues as set forth in Figures 3E-3F, wherein said peptide contains a LAV_{MAL}-specific antigenic determinant, at least one suitable buffer, and optionally an adjuvant;

b) immunizing the mammal with the vaccine;

c) optionally testing a blood sample from the mammal to assay for the affinity and activity of the antibodies.

47. (New) The method of claim 46, wherein said peptide is generated by chemical cleavage.

48. (New) The method of claim 46, wherein said peptide is expressed from a recombinant DNA.

49. (New) The method of claim 46, wherein said peptide is generated by chemical synthesis.

50. (New) The method of claim 46, wherein said peptide binds to antibodies in AIDS patient sera; and wherein said antibodies are capable of binding to viral antigens encoded by the LAV_{MAL} molecular clone having C.N.C.M. accession number I-641.